

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A composition comprising a protein in crystalline form, wherein the protein consists of residues 1-314 of SEQ ID NO:1, wherein said protein forms a complex with ~~a bisphosphonate or isoprenoid ligand~~ isopentyl pyrophosphate and Risedronate, and wherein the protein crystal has a crystal lattice in a P4₁22 space group and unit cell dimensions, +/- 5%, of a=88.80Å b=88.80Å and c=174.99Å, $\alpha=\beta=\gamma=90$.
- 2-3. (Canceled)
4. (Previously Presented) A composition according to claim 1 wherein the protein crystal diffracts X-rays for a determination of structure coordinates to a resolution of a value equal to or less than 3.0 Angstroms.
5. (Canceled)
6. (Currently Amended) A method for forming a crystal of a protein comprising:
forming a crystallization volume comprising a precipitant solution and a protein that consists of residues 1-314 of SEQ ID NO:1, wherein said protein forms a complex with ~~a bisphosphonate or isoprenoid ligand~~ isopentyl pyrophosphate and Risedronate; and
storing the crystallization volume under conditions suitable for formation of a protein crystal, wherein the protein crystal has a crystal lattice in a P4₁22 space group and unit cell dimensions, +/- 5%, of a=88.80Å b=88.80Å and c=174.99Å, $\alpha=\beta=\gamma=90$.
- 7-8. (Canceled)
9. (Previously Presented) A method according to claim 6 wherein the protein crystal diffracts X-rays for a determination of structure coordinates to a resolution of a value equal to or less than 3.0 Angstroms.
- 10-17. (Canceled)

18. (Previously Presented) The method according to claim 6 comprising:
diffracting the protein crystal to produce a diffraction pattern; and
solving the structure of the protein crystal from the diffraction pattern.
19. (Previously Presented) A non-crystalline protein consisting of residues 1-314 of SEQ ID NO:1.
20. (Canceled)
21. (Previously Presented) The method according to claim 18, the method further comprising:
performing rational drug design using the solved structure; and
identifying an entity that associates with the protein.
22. (Previously Presented) The method according to claim 21 further comprising selecting one or more entities based on the rational drug design and contacting the selected entities with the protein.
23. (Previously Presented) The method according to claim 22 further comprising measuring an activity of the protein when contacted with the one or more entities.
24. (Previously Presented) An isolated non-crystalline protein consisting of residues 1-314 of SEQ ID NO:1.